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(54) **SENSOR PLATFORM BASED ON TOROIDAL RESONANCES FOR RAPID DETECTION OF BIOMOLECULES**

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(58) **Field of Classification Search**
CPC G01N 21/554; G01N 21/3581; G01N 33/56983; G01N 2333/185
See application file for complete search history.

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(57) **ABSTRACT**

A plasmonic resonator can include: a substrate; a central resonator on the substrate; a first curved resonator disposed on the substrate and disposed at a first side of the central resonator; and a second curved resonator disposed on the substrate and disposed at a second side of the central resonator, the first curved resonator and the second curved resonator being asymmetric to each other with respect to the central resonator, and the central resonator and at least one of the first and second curved resonators being made of different materials.

18 Claims, 13 Drawing Sheets